

## RWE Humboldt Bay OCS-P-0561 - September

Latitude: 41.00 N Longitude: 125.00 W

### Weather Days

Wave Height > 6.0 ft Mean: 15.2 days Range: 11.4 - 19.0 days p50:19.5 days p75:18 days p90:16 days

Wave Height > 7.0 ft Mean: 11.5 days Range: 8.1 - 14.9 days p50:15.5 days p75:13 days p90:11 days

Wave Height > 8.0 ft Mean: 8.2 days Range: 5.2 - 11.2 days p50:11 days p75:9 days p90:8 days

Wind Speed > 10.0 knots Mean: 20.7 days Range: 18.1 - 23.2 days p50:20.5 days p75:19 days p90:17.5 days

Wind Speed > 15.0 knots Mean: 14.6 days Range: 11.3 - 17.8 days p50:15 days p75:12.5 days p90:11 days

Wind Speed > 20.0 knots Mean: 9.1 days Range: 6.1 - 12.1 days p50:9.5 days p75:7 days p90:6 days

### Working Window

Wave Height < 6.0 ft  
A 1 day or longer window will statistically occur 3.4 times per month  
A 2 day or longer window will statistically occur 1.8 times per month  
A 3 day or longer window will statistically occur 1.1 times per month

Wave Height < 7.0 ft  
A 1 day or longer window will statistically occur 4.1 times per month  
A 2 day or longer window will statistically occur 2.6 times per month  
A 3 day or longer window will statistically occur 1.8 times per month

Wave Height < 8.0 ft  
A 1 day or longer window will statistically occur 4.5 times per month  
A 2 day or longer window will statistically occur 3.2 times per month  
A 3 day or longer window will statistically occur 2.4 times per month

### Waves

Mean Height: 6 - 8 ft

The wave heights will occasionally reach 14 - 16 ft, but rarely higher.

Mean Period: 10 - 12 sec

The wave periods will occasionally reach 22 - 24 sec, but rarely longer.

Principle Direction, from: WNW

WindSea/Swell: 19% / 81%

### Winds

Mean Speed: 10 - 15 kts

The winds will occasionally reach 35 - 40 kts, but rarely greater.

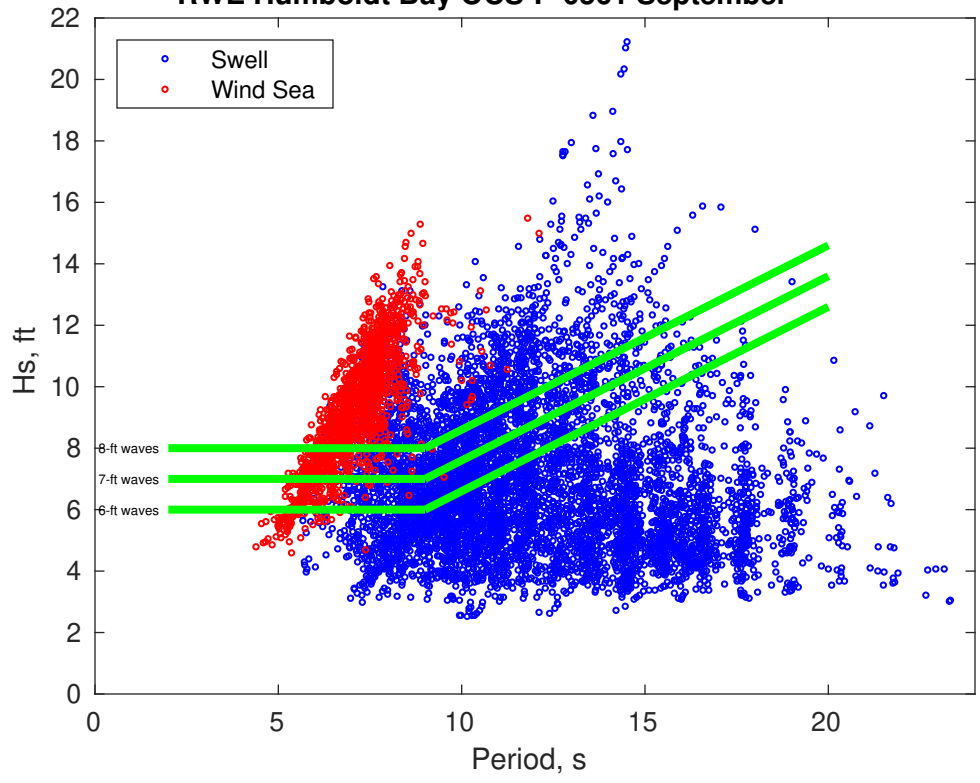
Principle Direction, from: NNW

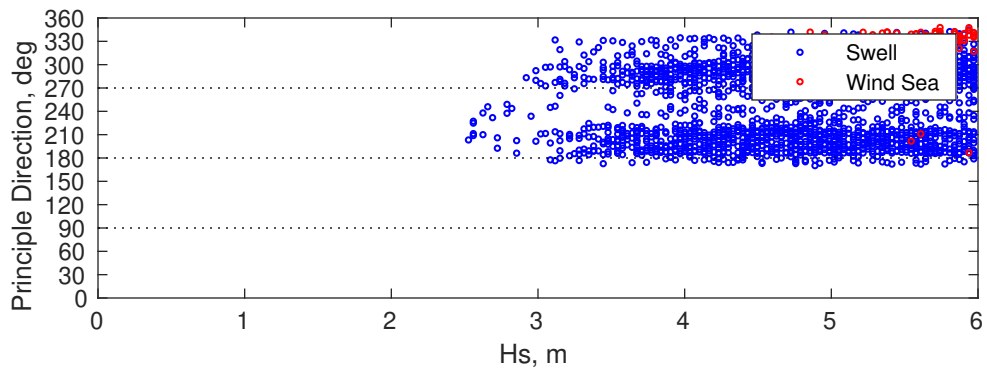
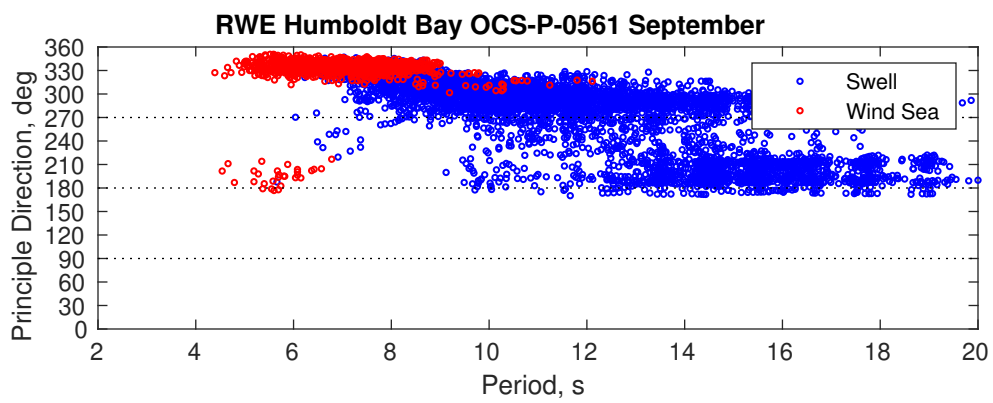
### Severe Storms

There is a 11 % chance of a storm occurring in the month with winds peaking above 34 kts.

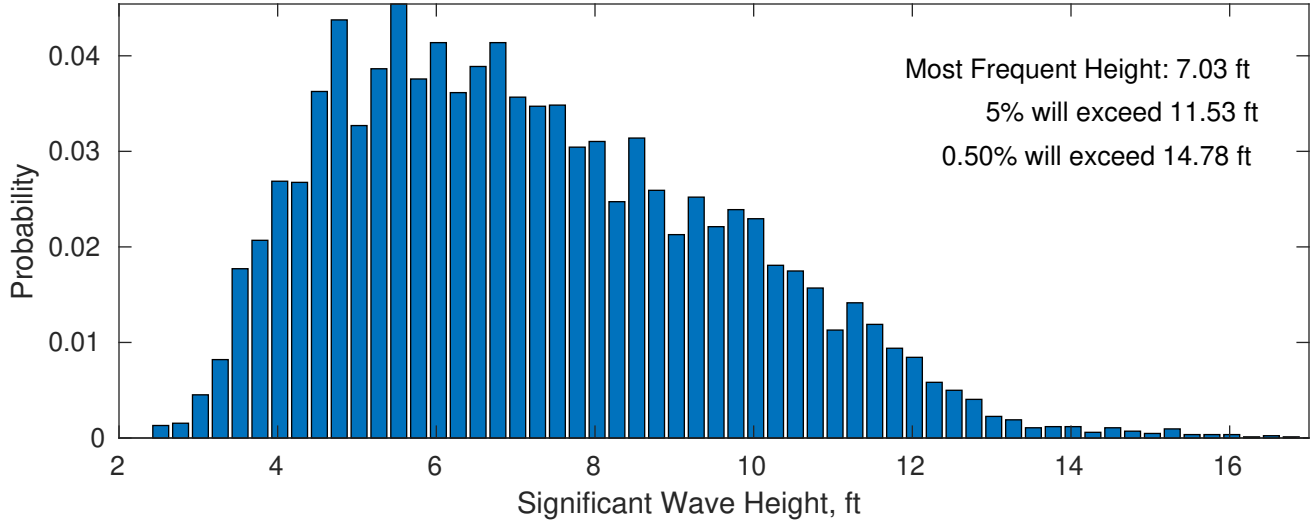
There is a 3 % chance of a storm occurring in the month with waves exceeding 3 m (10 ft) above the mean wave height.

### RWE Humboldt Bay OCS-P-0561 September

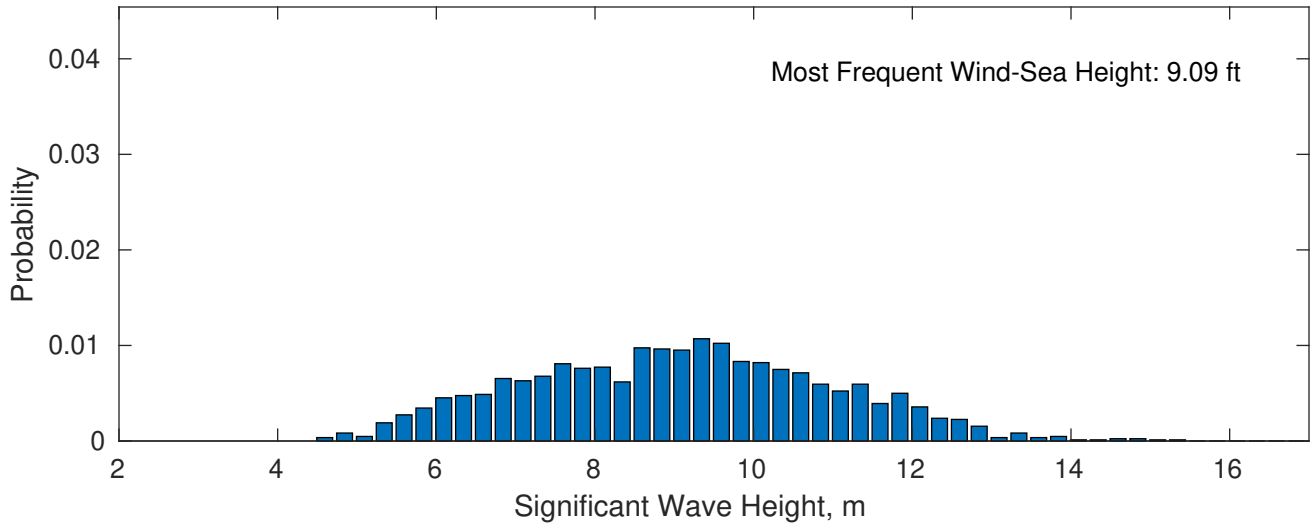




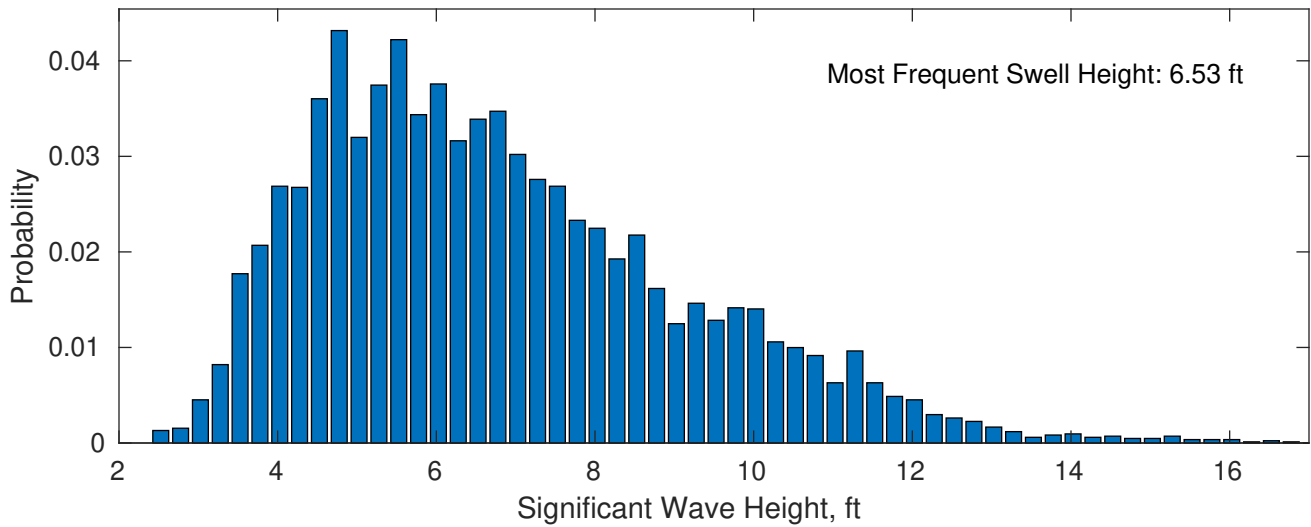
**September Wave Height PDF: 1979 - 2015**



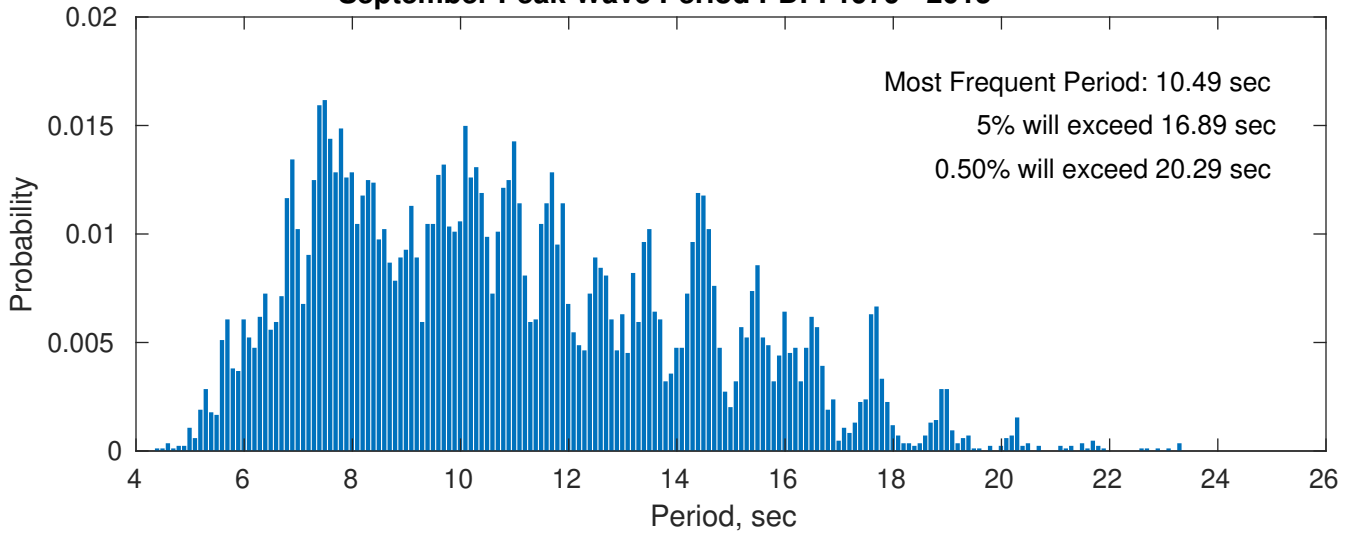
**Wind-Sea: 19.29%**



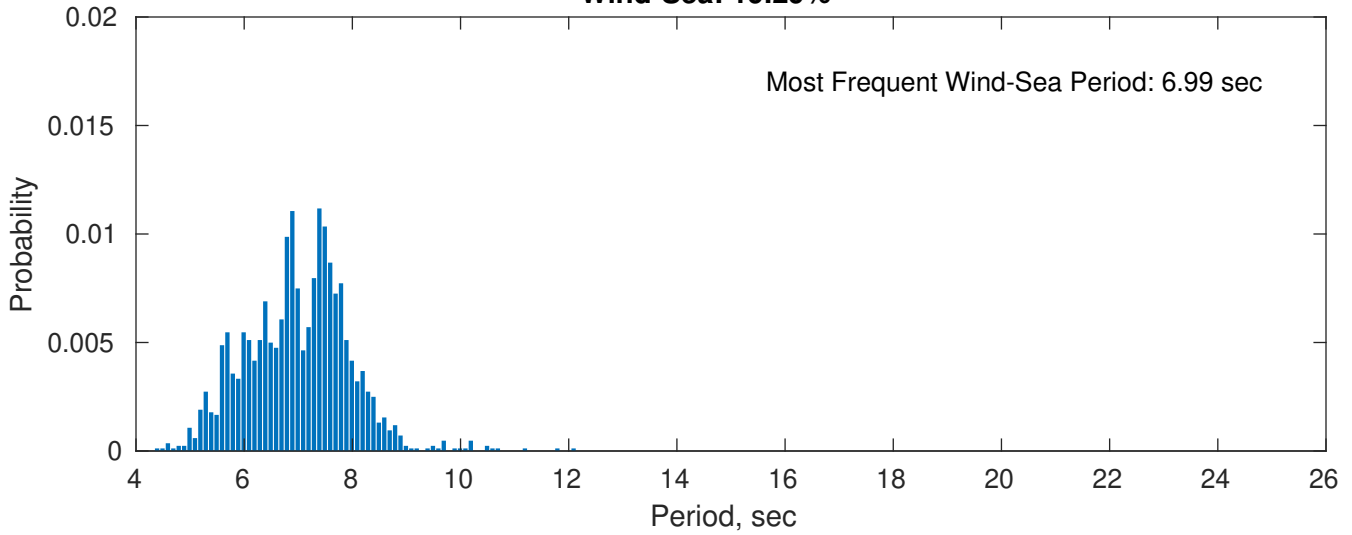
**Swell: 80.71%**



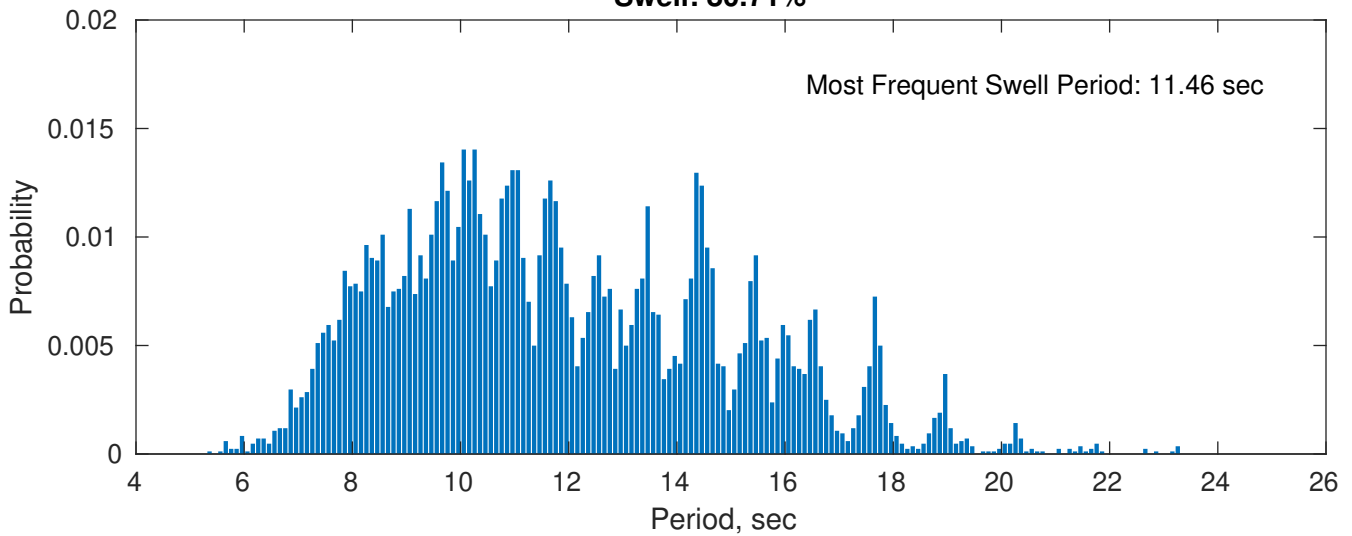
**September Peak Wave Period PDF: 1979 - 2015**



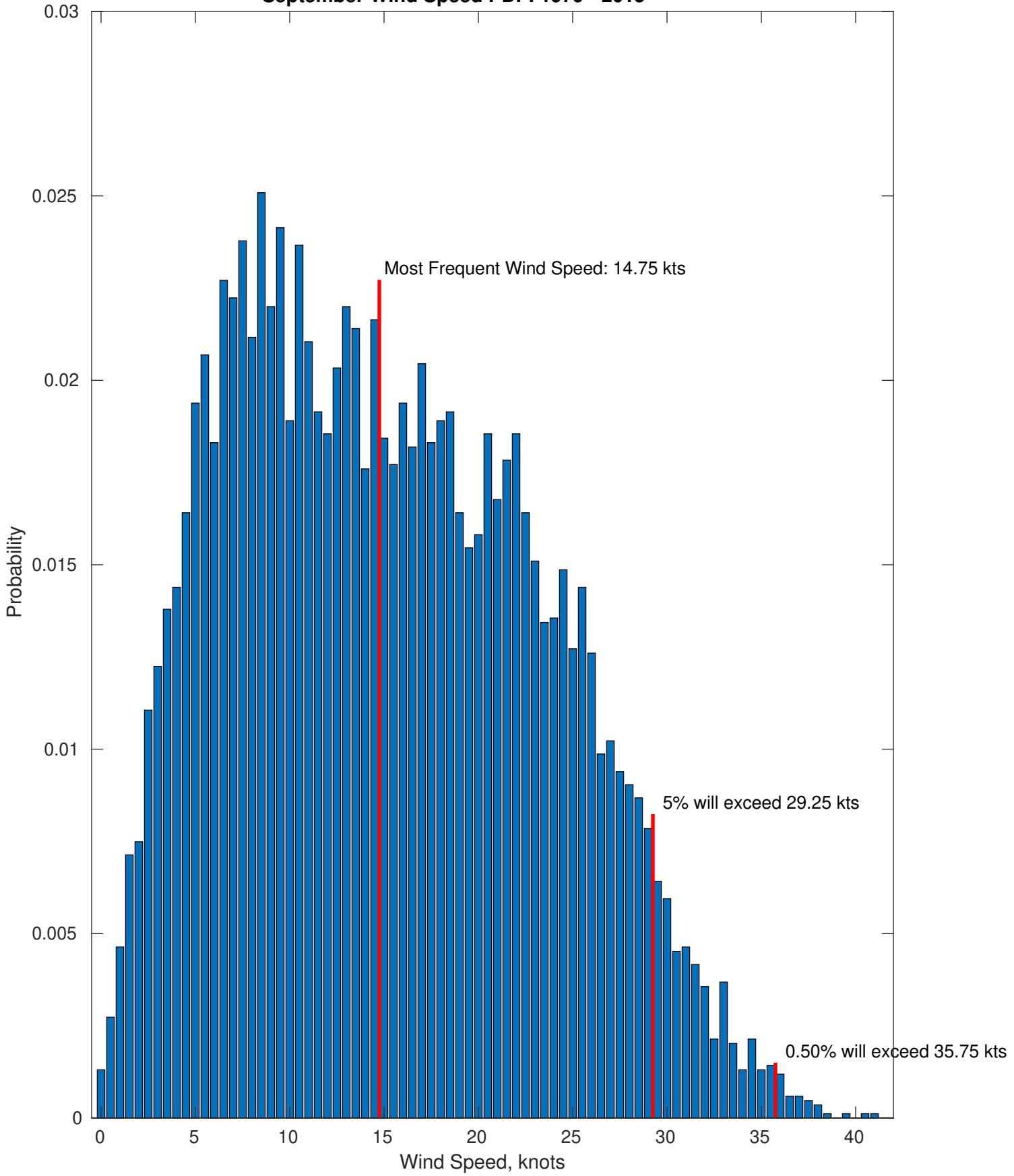
**Wind-Sea: 19.29%**



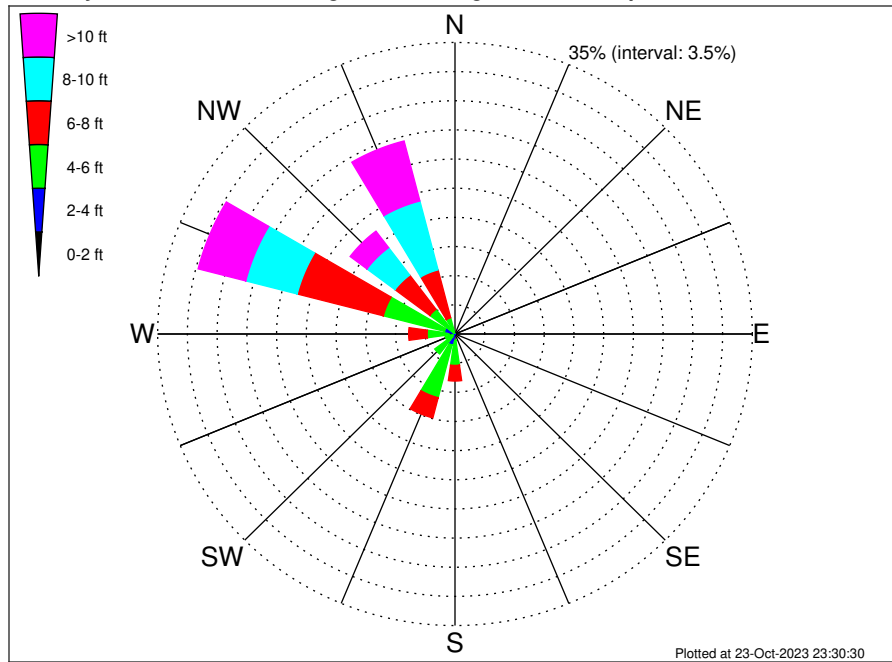
**Swell: 80.71%**



September Wind Speed PDF: 1979 - 2015



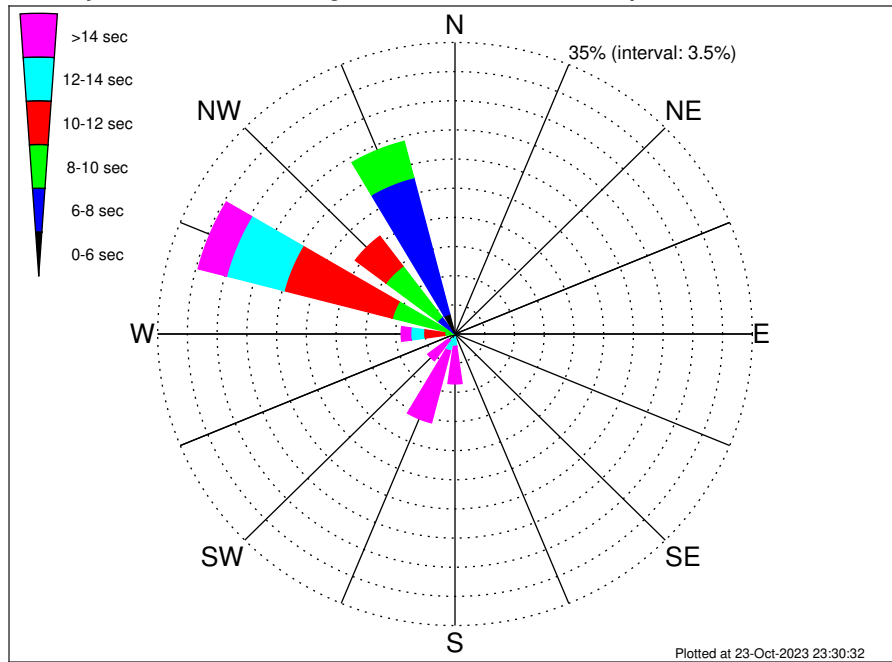
RWE Humboldt Bay OCS-P-0561 Climatological WaveHeight Rose for September: 1979 - 2015



Joint Frequency Distribution Table

|            | N    | NNE | NE | ENE | E | ESE | SE | SSE | S    | SSW   | SW   | WSW  | W    | WNW   | NW    | NNW   | Total  |
|------------|------|-----|----|-----|---|-----|----|-----|------|-------|------|------|------|-------|-------|-------|--------|
| calm       | •    | •   | •  | •   | • | •   | •  | •   | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| 1 - 2 ft   | •    | •   | •  | •   | • | •   | •  | •   | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| 2 - 4 ft   | •    | •   | •  | •   | • | •   | •  | •   | 0.76 | 1.36  | 0.44 | 0.18 | 0.71 | 1.27  | 0.24  | 0.12  | 5.08   |
| 4 - 6 ft   | •    | •   | •  | •   | • | •   | •  | •   | 3.01 | 6.54  | 2.56 | 1.01 | 2.57 | 7.44  | 3.47  | 1.89  | 28.49  |
| 6 - 8 ft   | 0.10 | •   | •  | •   | • | •   | •  | •   | 1.88 | 2.51  | 0.81 | 0.54 | 2.18 | 10.48 | 5.15  | 5.95  | 29.57  |
| 8 - 10 ft  | •    | •   | •  | •   | • | •   | •  | •   | 0.29 | 0.55  | 0.15 | 0.18 | 0.62 | 6.25  | 4.13  | 8.54  | 20.70  |
| 10 - 12 ft | •    | •   | •  | •   | • | •   | •  | •   | 0.06 | 0.06  | 0.06 | •    | 0.18 | 4.28  | 1.64  | 5.97  | 12.25  |
| 12 - 14 ft | •    | •   | •  | •   | • | •   | •  | •   | •    | 0.01  | •    | •    | 0.07 | 1.07  | 0.51  | 1.39  | 3.06   |
| 14 - 16 ft | •    | •   | •  | •   | • | •   | •  | •   | •    | •     | •    | •    | 0.01 | 0.33  | 0.15  | 0.08  | 0.58   |
| 16 - 18 ft | •    | •   | •  | •   | • | •   | •  | •   | •    | •     | •    | •    | •    | 0.11  | 0.10  | •     | 0.20   |
| > 18 ft    | •    | •   | •  | •   | • | •   | •  | •   | •    | •     | •    | •    | •    | •     | 0.07  | •     | 0.07   |
| Total      | 0.10 | •   | •  | •   | • | •   | •  | •   | 5.99 | 11.02 | 4.02 | 1.90 | 6.34 | 31.24 | 15.46 | 23.94 | 100.00 |

RWE Humboldt Bay OCS-P-0561 Climatological WavePeriod Rose for September: 1979 - 2015

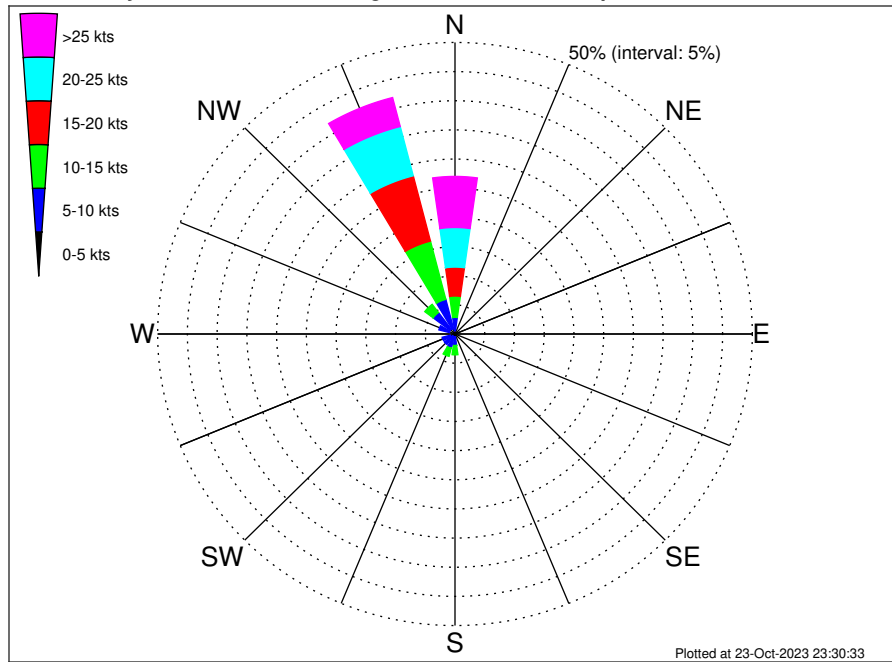


Joint Frequency Distribution Table

|             | N    | NNE | NE | ENE | E | ESE | SE | SSE | S    | SSW   | SW   | WSW  | W    | WNW   | NW    | NNW   | Total  |
|-------------|------|-----|----|-----|---|-----|----|-----|------|-------|------|------|------|-------|-------|-------|--------|
| calm        | •    | •   | •  | •   | • | •   | •  | •   | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| 1 - 2 sec   | •    | •   | •  | •   | • | •   | •  | •   | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| 2 - 4 sec   | •    | •   | •  | •   | • | •   | •  | •   | •    | •     | •    | •    | •    | •     | •     | •     | •      |
| 4 - 6 sec   | 0.07 | •   | •  | •   | • | •   | •  | •   | 0.12 | 0.12  | 0.01 | •    | •    | •     | 0.20  | 2.47  | 3.00   |
| 6 - 8 sec   | 0.02 | •   | •  | •   | • | •   | •  | •   | •    | 0.10  | 0.06 | 0.07 | 0.12 | 0.45  | 2.37  | 16.92 | 20.11  |
| 8 - 10 sec  | •    | •   | •  | •   | • | •   | •  | •   | 0.08 | 0.10  | 0.06 | 0.10 | 1.11 | 7.17  | 7.62  | 4.49  | 20.73  |
| 10 - 12 sec | •    | •   | •  | •   | • | •   | •  | •   | 0.19 | 0.33  | 0.24 | 0.65 | 2.49 | 13.16 | 4.51  | 0.04  | 21.61  |
| 12 - 14 sec | •    | •   | •  | •   | • | •   | •  | •   | 1.09 | 1.47  | 0.64 | 0.62 | 1.51 | 6.99  | 0.57  | 0.01  | 12.91  |
| 14 - 16 sec | •    | •   | •  | •   | • | •   | •  | •   | 2.27 | 4.67  | 1.56 | 0.34 | 0.84 | 2.60  | 0.15  | •     | 12.45  |
| 18 - 20 sec | •    | •   | •  | •   | • | •   | •  | •   | 1.66 | 3.51  | 0.84 | 0.12 | 0.21 | 0.63  | 0.02  | •     | 7.00   |
| 22 - 24 sec | •    | •   | •  | •   | • | •   | •  | •   | 0.57 | 0.73  | 0.61 | •    | 0.06 | 0.23  | 0.01  | •     | 2.20   |
| Total       | 0.10 | •   | •  | •   | • | •   | •  | •   | 5.99 | 11.02 | 4.02 | 1.90 | 6.34 | 31.24 | 15.46 | 23.94 | 100.00 |



RWE Humboldt Bay OCS-P-0561 Climatological Wind Rose for September: 1979 - 2015



Joint Frequency Distribution Table

|             | N     | NNE  | NE   | ENE  | E    | ESE  | SE   | SSE  | S    | SSW  | SW   | WSW  | W    | WNW  | NW   | NNW   | Total  |
|-------------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|--------|
| calm        | 0.01  | 0.02 | 0.01 | 0.01 | 0.02 | 0.01 | 0.04 | 0.02 | 0.04 | 0.01 | 0.05 | 0.04 | 0.04 | 0.05 | 0.04 | •     | 0.40   |
| 0 - 5 kts   | 0.57  | 0.63 | 0.26 | 0.21 | 0.17 | 0.21 | 0.23 | 0.40 | 0.46 | 0.70 | 0.45 | 0.77 | 0.73 | 0.96 | 1.00 | 0.95  | 8.72   |
| 5 - 10 kts  | 2.27  | 0.34 | 0.07 | 0.07 | 0.06 | 0.04 | 0.26 | 0.62 | 1.47 | 1.80 | 1.75 | 1.43 | 1.21 | 1.80 | 3.58 | 5.18  | 21.95  |
| 10 - 15 kts | 3.66  | 0.10 | 0.02 | 0.01 | •    | 0.01 | 0.02 | 0.31 | 1.61 | 1.45 | 0.62 | 0.18 | 0.14 | 0.21 | 1.76 | 10.32 | 20.43  |
| 15 - 20 kts | 4.96  | 0.10 | •    | •    | •    | •    | •    | 0.20 | 0.68 | 0.56 | 0.04 | •    | 0.01 | •    | 0.13 | 11.57 | 18.24  |
| 20 - 25 kts | 6.79  | 0.06 | •    | •    | •    | •    | •    | 0.05 | 0.42 | 0.04 | •    | •    | •    | •    | 0.01 | 8.73  | 16.09  |
| 25 - 30 kts | 5.66  | 0.01 | •    | •    | •    | •    | •    | 0.02 | 0.21 | 0.01 | •    | •    | •    | •    | •    | 4.20  | 10.12  |
| 30 - 35 kts | 2.51  | •    | •    | •    | •    | •    | •    | •    | 0.01 | •    | •    | •    | •    | •    | •    | 0.89  | 3.41   |
| 35 - 40 kts | 0.57  | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | 0.05  | 0.62   |
| 40 - 45 kts | 0.02  | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •     | 0.02   |
| 45 - 50 kts | •     | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •    | •     | •      |
| Total       | 27.03 | 1.26 | 0.37 | 0.31 | 0.25 | 0.27 | 0.55 | 1.63 | 4.90 | 4.57 | 2.90 | 2.41 | 2.13 | 3.02 | 6.52 | 41.89 | 100.00 |